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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/717,537	11/21/2000	Christopher G. Kaler	777.335US1	1797

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EXAMINER

VU, TUAN A

ART UNIT

PAPER NUMBER

2124

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/717,537

Applicant(s)

KALER ET AL.

Examiner

Tuan A Vũ

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-30,33 and 63-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-30,33 and 63-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the Applicant's response filed 6/18/04.

As indicated in Applicant's response, claims 25 has been amended and claims 1-24, and 34-62 have been canceled. Claims 25-30, 33, and 63-66 are pending in the office action.

Allowable Subject Matter

2. The indicated allowability of claims 32, 63, and 66 is withdrawn in view of the newly discovered reference(s) to Siugura (USPN: 6,701,310).

As mentioned from the last rejection, the feature 'selecting one of the keyword expanders' (claim 63) or 'selecting one of a plurality of keyword-expansion service providers' (claim 66) were mentioned for possible allowance; but when these feature have been incorporated in the independent claim, the so-amended claim raises more issues than anticipated and thus necessitate new grounds of rejection.

Likewise, the features 'plurality of expanders' and 'keyword broker for selecting' of claim 32 as added to the independent and amended claim 25 also raise more issues therein which necessitate new grounds of rejection.

Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 63 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a “useful, concrete, and tangible result” be accomplished. An “abstract idea” when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the “useful arts” when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a “useful, concrete and tangible result”.

As per claim 63, the claim recites a method for developing software, such method comprising receiving a request for keyword expansion in a development document; receiving a parameter specifying a keyword domain; selecting one keyword expanders in response thereof; and expanding keywords in the selected expander. Even though the environment suggests a software development environment, the steps of receiving, selecting and expanding using a selected expander do not add more inventive steps to the software development nor do they amount to a useful result (e.g. a keyword being expanded does not yield a software being developed as a result) in a tangible environment wherein software is being developed. In other words, the process of (i) receiving, (ii) selecting, and (iii) expanding based on some expander being selected can be done without computer utilities or hardware implementation known in the useful arts of computer software development because it appears as though the software development requiring a development result is not connected to that expansion. There are no limitations recited for specifying the nature of the expander, which can be just a human mental process. The above 3 steps (i, ii, iii) therefore amount to a mere abstract idea without yielding a concrete, tangible and useful result according to the above *practical application test*; and as a whole the claim is rejected for non-statutory subject matter.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 25-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationship is: a means or apparatus for linking/correlating the interface (i.e. interface in the communication with service providers of the software development system as mentioned in the outset) for receiving of commands and the interface to the keyword processing subsystem. In other words, for enabling expansion of keywords via a selected expander there should be an application for which a keyword is used or needed, and the absence of such application in the software development system does not inform how a keyword subsystem is associated with user's commands in the software development context, unless it is recited in the body of claim or the preamble that the method is about a keyword expansion service.

As it stands, there is no weight imparted to the software development limitation for it does not reflect in terms of more specifics linking it with the keyword limitation in the body of the claim, and the service to expand keywords will be treated as if it were included among other services associated with any application wherein the user command interface is included.

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The claims 26-30 are also rejected for being dependent on a rejected base claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 25-30, 33, and 63-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Underwood, USPN: 6,523,027 (hereinafter Underwood), in view of Kramer, USPN: 6,216,140 (hereinafter Kramer); and further in view of Sugiura et al., USPN: 6,701,310 (hereinafter Sugiura).

As per claim 25, Underwood discloses a client for a software development system having a plurality of service providers, said service providers development services comprising:

means for receiving commands from a user for executing development operations (e.g. Fig. 10-14; Fig. 72B; Fig. 77-82);

an interface for communicating with compatible interfaces of all the plurality of service providers (e.g. *user interface, activities, ASP, views* – Fig. 47; *presentation* - Fig. 48; *Web & Application Server, Netscape communicator, Internet Explorer* - Figs. 51-53; *console Site server* – Fig. 60-64; Fig. 56-67; Fig. 72B – Note: more than one server amounts to a set of service providers providing services and further disclose compatible interfaces which are the likes of windows-based interfaces under web-based protocol, the

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compatibility of such communication interface being inherently compatible with the mutually communicating services).

Underwood does not disclose an interface to a keyword processing system in PVCS and in COM interfaces (e.g. *Delimiter/Keyword* - col. 258, lines 5-40; *ByRef* - col. 297, line 65 to col. 298, line 45); but does not disclose that such subsystem comprises a plurality of expanders for processing different sets of keywords and a keyword broker for selecting among the expanders. Underwood however discloses communication in multi-tiered paradigm where heterogeneous data sources providers, like DBMs servers, communicate using COM/CORBA/DCOM standard via a broker service (e.g. col. 124, lines 6-17; col. 127, lines 4-17; Fig. 56, 57, 65-66; 73-75); and storing of software files in PVCS and SourceSafe with keyword implementation for version control in Java documentation (e.g. col. 171, line 65 to col. 172, line 10; col. 183, lines 1-43) and version control tool with keyword and merging (e.g. *Delimiter*, *NoActionsMerge* - col. 258, lines 5-40, 47-65). The use of software version control as taught by Underwood's including document merging is further enhanced via Kramer's teaching of a keyword expander in merging of document (e.g. col. 9, lines 39-54) and merging with separation of attributes and other properties (e.g. *limited value attributes* - col. 11, line 15 to col. 12, line 31). In the same line for expanding keywords in addressing user's queries to Database as suggested above in Underwood use of ORB/COM/Corba, Sugiura discloses a keyword expansion unit in conjunction with a search engine being selected for goodness factor by a engine selector (Fig. 2; col. 7, lines 1-50). In view of the multi-providers aspect of Underwood's software distribution/request fulfilling system in conjunction with database queries and keyword processing in version control tool, it would have been obvious to

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implement said keyword processing by Underwood in its version control system with an expansion unit as taught by Kramer and a selector as taught by Sugiura for selecting a search engine fit to provide such keyword expansion according to the multi-service paradigm proffered by Underwood. One of ordinary skill would be motivated to enhance the merging purposes in Underwood's teachings so as to use keyword expansion based on a correct type therefor as taught by Kramer looking for distinguishing differences of data in a highly hierarchy of data stored; and to combine the benefits thereof with that of selector engine by Sugiura that would select the best engine fit to expand keywords thereby provide a proper and focused search engine or result (see Kramer and Sugiura: Background)

As per claim 26, Underwood discloses means for accessing and processing a plurality of enumerators (e.g. col. 29, lines 5-15; col. 35, lines 30-54; Figs. 103A, 147 – Note: Collection and marshalling as well as analysis/browsing of HTML/ASP/Scripts are equivalent to enumerator; Fig. 101-118 – Note: SourceSafe display of items is equivalent to enumerating and mapping to user's criteria).

As per claim 27, Underwood discloses a merge subsystem (see claim 10; col. 258, lines 50-66).

As per claim 28, Underwood discloses a plurality of preprocessors for receiving and modifying the input stream representing a plurality of input development documents (e.g. Fig. 94—103A; Fig. 128, 145B, 149, 151 – Note: security server and version control servers are equivalent to preprocessors); a merge engine for outputting a merge document (re claim 10; col. 258, lines 50-66 – Note: preprocessors to route the request for merge to PVCS server are equivalent to preprocessors for merge subsystem).

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As per claim 29, Underwood discloses a selection of hosts and servers and security services (e.g. col. 318, lines 47-67; col. 289, lines 28-60; *Routers* – col. 311, line 46 to col. 312, line 12; Fig. 124-127; *Workbench*, *SourceSafe Administrator*, *SourceSafe Explorer*, *Queries*, *Tracking*, *Reports* – Fig. 104-117 – Note: each processes called upon by the GUI events to retrieve, modify and reconcile documents for a development process is equivalent to a selected processing element preceding or following another processing element); hence discloses a selection service for processors or preprocessors, i.e. a brokers, some of which, implicitly, can be merge subsystem processors.

As per claim 30, a plurality of postprocessors outputting a merge document is implicitly implied from the merge processing service as disclosed in claims 28 and 10 (Note: a server operable (PVCS server) to yield a merged document is a postprocessor while the preprocessors are those who take the input for the merging operation; and the plurality of processors to take the output back to the client machine are the same processors in the path directing the input going to the merging machine).

As per claim 33, Underwood discloses a version store for storing and retrieving development documents and processing one or more thereof (e.g. Fig. 93A-B; *SourceSafe* - Fig. 110 – Note: check in files into version control repository is equivalent to version store).

As per claim 63, Underwood discloses a method for developing software, comprising:

receiving a request for accessing or modifying a version stored in a development document (e.g. Fig. 93A-B; *SourceSafe* - Fig. 110; *Workbench*, *SourceSafe*

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Administrator, SourceSafe Explorer, Queries, Tracking, Reports – Fig. 104-117; PVCS - col. 258, lines 5-40, 47-65).

But Underwood does not explicitly disclose a request for keyword expansion; nor does Underwood disclose receiving a parameter specifying a keyword domain. The limitation as to provide a parameter when a keyword is processed is inherent in any keyword-processing engine; and is implicitly disclosed from above. Further, in view of the teachings by Underwood using merge utilities in version stored with processing of keywords, the motivation to enhance Underwood's teachings with allowing a request for keyword expansion via a search engine thus suggested using the keyword expansion by Kramer, e.g. processing the type and attributes imparted to the keyword for honing the search and merging process, i.e. characterizing a focused domain/type of keyword, would have been obvious for the same reasons as set forth in claim 25.

Nor does Underwood teach selecting one of a plurality of expanders in response to such parameter, and expanding according to the selected expander. The limitation would have been obvious in light of the rationale as set forth in claim 25 combining the multi-server paradigm and version control/merging by Underwood with the teachings of Kramer and Sugiura's use of selector engine therein.

As per claim 64, Underwood discloses merging of version store content (e.g. col. 90, line 59 to col. 91, line 14; *NoActionsMerge* - col. 258, lines 50-66) and keyword processing (*ByRef* – col. 297, line 65 to col. 298, line 45) but does not disclose determining that keyword expansion is required when processing a request for search, retrieval or modification/merge of document version as mentioned in the version control tool. Kramer, in a development documents merging method analogous to Underwood's,

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discloses merging with separation of attributes and other properties (e.g. *limited value attributes* - col. 11, line 15 to col. 12, line 31), hence has suggested a need for providing more specificity in addressing a search/merge with particular keyword attributes/type or parameters to look, i.e. whether a keyword expansion is required when fulfilling an user's request. It would have been obvious for one of ordinary skill in the art at the time the invention was made to add to Underwood's processing of keywords the separation and analysis of attributes as suggested by Kramer, i.e. determination as to expand a keyword because, according to Kramer, "more inclusive or conservative of the changes between source and target versions is favored" (col. 11, lines 39-62; Background).

Nor does Underwood disclose selecting a generic keyword expander rather than any expander; and expanding the keywords according to the selected generic expander. But this limitation would have been obvious in view of the rationale set forth in claim 25 above.

As per claim 65, in view of the analysis of type/attributes as taught by Kramer, the selected expander being used for keyword expansion limitation in accordance with the keyword domain would have been obvious for the same rationale as set forth in claim 63.

As per claim 66, this claim is a computer-readable medium version of claim 63, hence is rejected with the corresponding rejection as set forth therein.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (703)305-7207.

The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:


(703) 872-9306 (for formal communications intended for entry)

or: (703) 746-8734 (for informal or draft communications, please consult Examiner before using this number)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA. , 22202. 4th Floor(Receptionist).

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VAT
August 10, 2004



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